

GOODNEWS BAY PLATINUM OCCURRENCE, HAGEMASTER ISLAND QUADRANGLE

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*****Field Report
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UNITED STATES DEPARTMENT OF THE INTERIOR
Manuel Lujan, Jr., Secretary
BUREAU OF MINES
T S ARY, DIRECTOR

INTRODUCTION

The Goodnews Bay Ultramafic Complex underlies Red and Susie Mountains and is known to be the source of the 650,000 troy ounces of PGM that has been mined from the district (Mertie, 1976). However, no economic platinum lode source has been located on either Red Mountain or adjacent Susie Mountain (fig.1).

The specific objectives of this investigation were to confirm two highly anomalous PGM sites that were reported by Ashton Mining and the Bureau's work on Ashton's findings. In 1989 the Bureau received Ashton's bulk rejects from the Goodnews Bay project and re-analyzed some of Ashton's samples (table 1). The Bureau was encouraged by the results and re-evaluated the samples that showed significant platinum concentrations. This report summarizes field work conducted in the Goodnews Bay area during the summer of 1990.

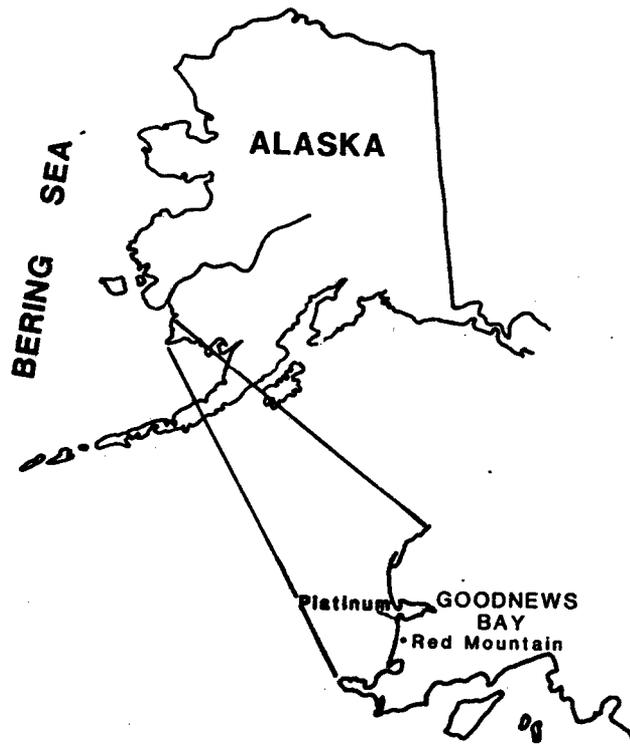


Figure 1. Index map showing project area in southwest Alaska.

Table 1. - Reanalysis of Ashton Mining's samples (values in ppb)

SAMPLE NUMBER Units	Pt ppb	Pd ppb	Ir ppb	Os ppb	Ru ppb	Rh ppb	Au ppb
DDH 88#6 81.25-81.35	<10	<10	1.5	<2	<10	<20	2
DDH 88#6 81.35-81.40	<20	<10	0.8	<5	<20	<20	8
DDH 88#6 81.40-81.44	<20	<10	1.5	<5	<20	<20	5
DDH 88#6 81.47-81.51	<20	<10	4.7	2	<20	<20	3
BULK REJECT CONC	>20000	3200	27.0	1300	<100	<100	2100
8RF39	880	31	12.0	2	<10	12	3
8RM6	1010	24	17.0	7	<10	15	1
8RM12	1000	22	29.0	26	<10	20	3
DDH 88#1 35-36	20	<10	<0.2	<2	<10	<1	08
DDH 88#1 160-161	240	82	0.6	<2	<10	11	6
DDH 88#10 14-15	20	<10	2.8	<2	<10	2	0.5

MINING HISTORY

Reed (1931) reports that PGM were first discovered in pan samples from Fox Gulch in 1926 (fig. 2). Small-scale mining plants were operated intermittently from 1927 to 1934 on Platinum, Squirrel, and Clara Creeks, and on Fox and Dry Gulches (fig. 2). The Goodnews Bay Mining Co. began operation with a dragline excavator in 1934 and Clara Creek Mining Co. began dragline excavator operations in 1936. By 1936 the Goodnews Bay Mining Co. had acquired all of the Clara Creek mining titles and virtually all of the mining rights along the Salmon River and its tributaries. In 1937, the Goodnews Bay Mining Co. began mining in the Salmon River Valley with a newly installed, 8-cubic-foot bucket-line dredge that has continued to operate until 1985 (fig. 2). In 1980 Hanson Properties of Spokane, WA. acquired the Salmon River holdings and is currently the present mine operator. In 1987 Ashton Mining Inc. leased the land from Hanson Properties and conducted PGM exploration for both placer and lode potential. In 1988 Ashton conducted soil sampling and magnetometer work on both Susie Mountain and Red Mountain and in addition, diamond-drilled more than 9,000 feet on various areas of Red Mountain.

OWNERSHIP

The Placer holdings in the Salmon River Valley and tributaries belong to Hanson Properties. All surface mineral rights on both Red and Susie Mountains belong to Calista Corporation.

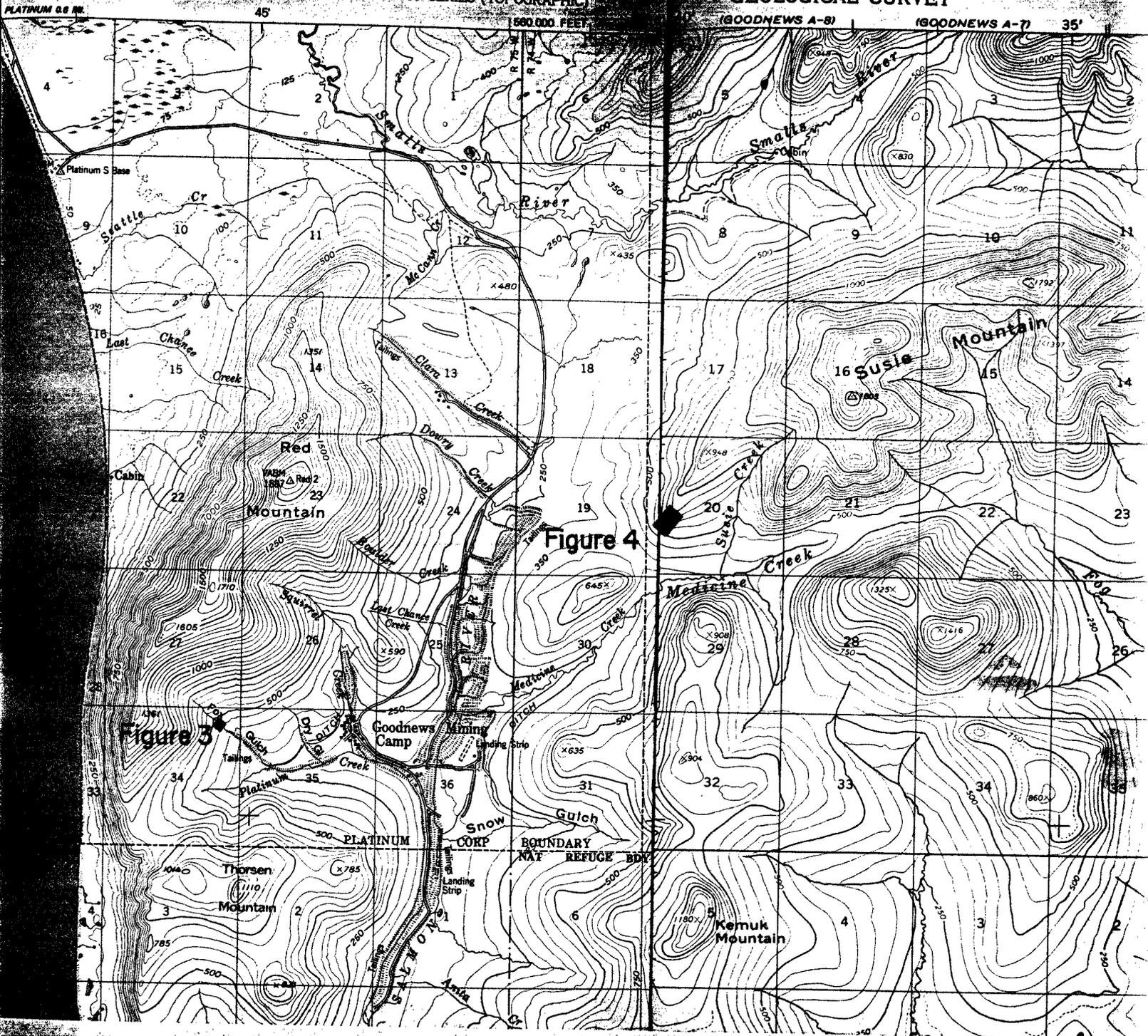


Figure 2. - Location Map of Fox Gulch and Susie Mountain Projects.

PHYSIOGRAPHY

The report area lies in a region of subdued relief. Elevations range from sea-level to 1,887 feet at the summit of Red Mountain. The area around Red Mountain has been extensively glaciated, with evidence of at least four glacial advances. Mertie (1976) reported finding large glacial erratics at elevations as high as 800 feet on the north end of Red Mountain. Extensive deposits of reworked glacial material are found at the northwestern margin of Red Mountain and in the Salmon River Valley as far south as Dowry and Clara Creeks (fig. 2).

The climate in this part of Alaska is usually wet and foggy from April through September. The mean annual temperature is 33 degrees F. The mean annual precipitation is 45 inches with the heaviest rainfall occurring in late summer.

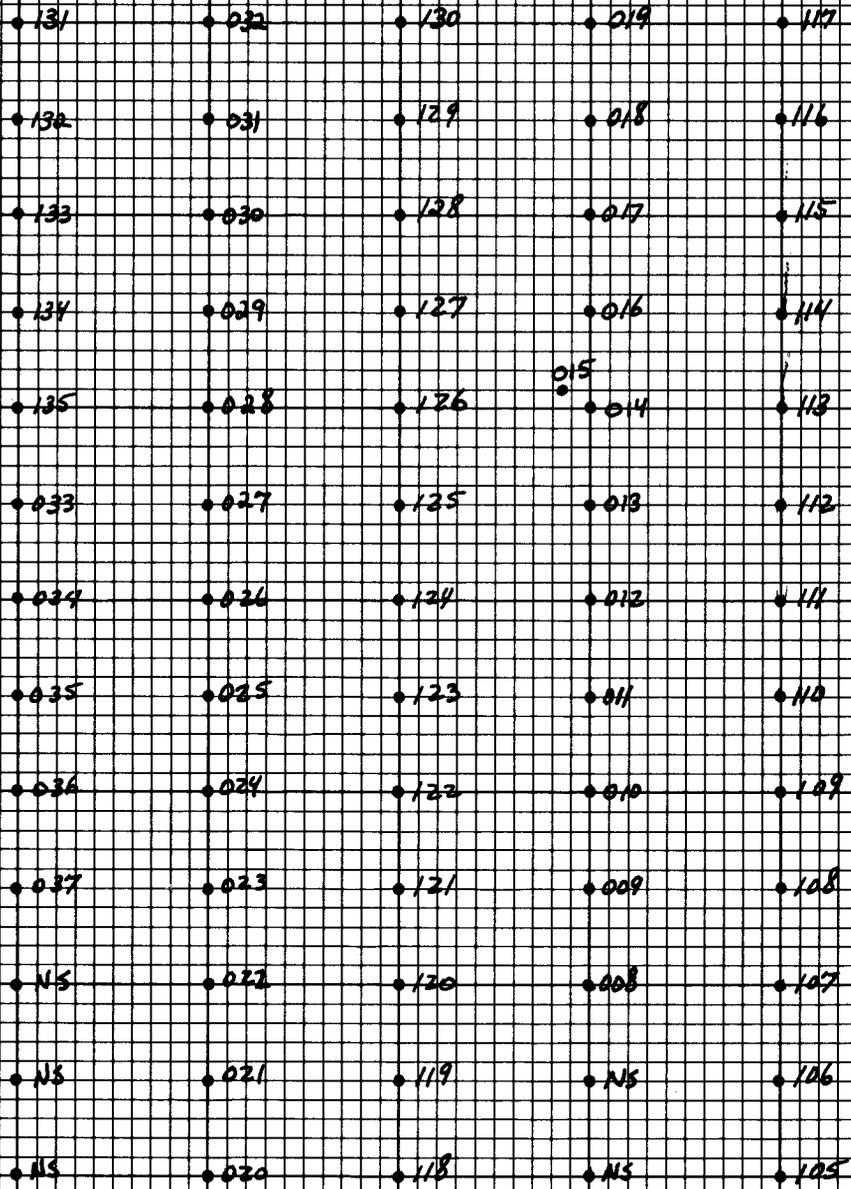
ACCESS

Regularly scheduled air service is available from Bethel to the village of Platinum, on Goodnews Bay. A gravel road spans the 10 miles between Platinum and the mine camp at the southeastern end of Red Mountain. The mine was reached by hiring a truck that belonged to one of the villagers in the town of Platinum. From the mine camp, both areas of interest were accessed by foot. The investigation was hampered by extremely high winds and heavy rain fall.

1990 FIELD-WORK CONDUCTED BY THE BUREAU

During the period of August 14-18, 1990, two areas of the Goodnews Bay Ultramafic complex were briefly investigated for platinum lode potential. In an effort to see if the highly anomalous platinum values found in DDH#6 81-82 meters (table 1) continued to the surface, a 180-foot section of Fox Gulch on the southwestern side of Red Mountain was mapped and sampled (fig.3). The Fox Gulch project tested a contact area between an olivine clinopyroxenite unit and dunite which are separated by a diffuse zone of wherlite and serpentinized ultramafic rock. Platinum values ranged from <5 to 47 ppb (table 2). The samples represent continuous chip samples that were taken along a bedrock exposure in the mined-out creek bed. Each sample weighed approximately of 3 to 4 pounds.

The Susie Mountain project was designed to reproduce anomalous levels of platinum in rubble-crop samples found by Ashton Mining Co.. Samples were collected on a pre-existing Ashton Mining Co. grid located on the south side of the mountain (fig. 2 and 4). In an effort to keep from biasing the samples, three rocks were taken randomly from each site. The sampling program on Susie Mountain failed to reproduce Ashton Mining's findings. The highest platinum value in any rock type sampled was 117 ppb (table 3).



All samples have a KW-28 prefix

Figure 4. - Sample location map for the Susie Mountain project.

ANALYTICAL PROCEDURES

All samples were crushed to -150 mesh and analyzed by fire assay with a direct current plasma emission spectroscopy finish. These analyses were made by Bondar-Clegg & Co., Ltd., in Vancouver, British Columbia.

SUMMARY AND RECOMMENDATIONS

During the 1990 investigations to re-examine anomalously high values of PGM's the Bureau took 79 rock samples and found no highly anomalous PGM's. The interval in DDH#6 that had anomalously high PGM's was found not to have extended to the surface. No further work is recommended at this time.

Table 2. - Analytical results of the Fox Gulch samples

Sample ID Units	Au ppb	Pt ppb	Pd ppb	Cu ppm	Ni ppm
KW 27859	7	38	3	8	421
KW 27860	3	47	2	5	95
KW 27861	3	39	2	4	106
KW 27862	3	23	2	10	722
KW 27863	2	20	2	6	822
KW 27864	2	31	4	11	793
KW 27865	1	28	2	6	780
KW 27866	2	24	2	7	792
KW 27867	3	30	2	6	726
KW 27868	4	21	3	12	688
KW 28001	3	14	7	16	676
KW 28002	3	20	4	12	693
KW 28003	3	-5	3	41	71
KW 28004	3	16	3	10	731
KW 28005	2	17	3	14	734
KW 28006	2	21	3	13	678
KW 28007	3	12	2	4	821
KW 28136	2	22	2	15	712

Table 3. - Analytical results for the Susie Mountain project

Sample ID Units	Au ppb	Pt ppb	Pd ppb
KW 28008	-1	7	2
KW 28009	-1	6	3
KW 28010	-1	17	-1
KW 28011	1	28	9
KW 28012	-1	5	-1
KW 28013	-1	-5	1
KW 28014	-1	5	-1
KW 28015	-1	6	-1
KW 28016	-1	6	1
KW 28017	-1	6	-1
KW 28018	-1	16	2
KW 28019	3	40	17
KW 28020	3	68	12
KW 28021	-1	9	1
KW 28022	2	88	13
KW 28023	-1	7	1
KW 28024	-1	11	1
KW 28025	-1	11	5
KW 28026	-1	30	2
KW 28027	2	30	2
KW 28028	-1	24	3
KW 28029	-1	61	3
KW 28030	3	11	1
KW 28031	2	12	2
KW 28032	2	30	2
KW 28033	-1	-5	-1
KW 28034	4	15	1
KW 28035	1	16	2
KW 28036	-1	68	3
KW 28037	2	31	3
KW 28105	2	6	1
KW 28106	1	10	1
KW 28107	-1	117	3
KW 28108	2	39	4
KW 28109	1	10	-1
KW 28110	2	47	2
KW 28111	2	15	2
KW 28112	3	64	4
KW 28113	2	10	2
KW 28114	-1	20	2
KW 28115	1	30	3
KW 28116	2	20	2
KW 28117	1	19	9
KW 28118	1	37	7
KW 28119	-1	12	2
KW 28120	1	21	2

Table 3. - continued

Sample ID Units	Au ppb	Pt ppb	Pb ppb
KW 28121	2	10	2
KW 28122	3	13	3
KW 28123	2	13	2
KW 28124	2	14	2
KW 28125	2	17	3
KW 28126	-1	12	2
KW 28127	2	31	3
KW 28128	2	28	1
KW 28129	3	11	3
KW 28130	1	9	2
KW 28131	2	14	2
KW 28132	3	29	3
KW 28133	1	12	2
KW 28134	2	12	3
KW 28135	2	8	2

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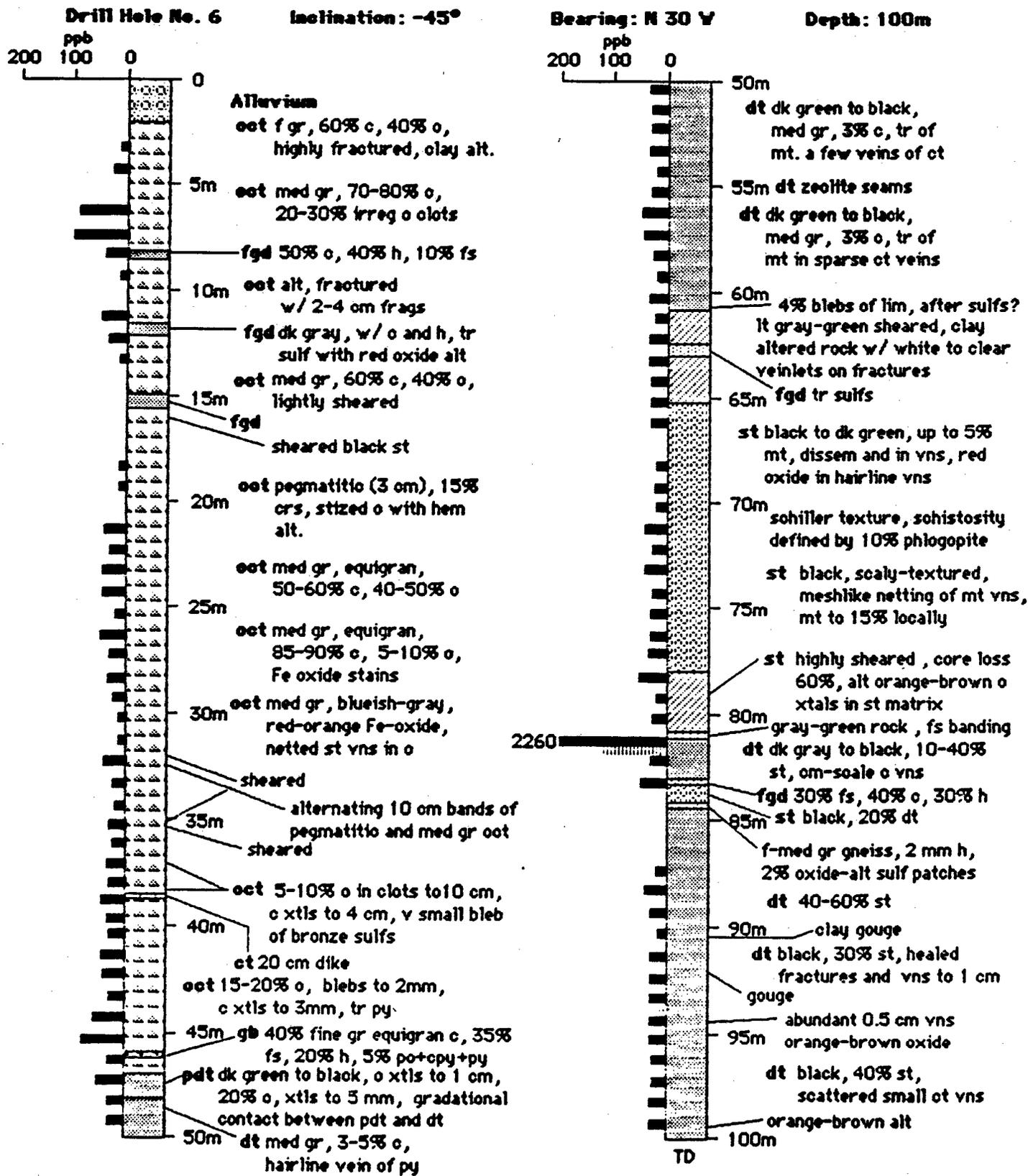
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REFERENCES

- Reed, I., 1931. Report on Platinum Placers south of Goodnews Bay, Alaska. Misc. Rep. Ak Territorial dept. of Mines, Juneau, Ak., 1931, p.26.
- Mertie, J.B., Jr., 1976, Platinum deposits in the Goodnews Bay District, Alaska. U.S. Geological Survey Prof. Paper 938, 42 p.

GOODNEWS BAY LODE PLATINUM PROJECT

GRAPHIC DRILL LOG



(see explanation, page 1)

DDH 6 Nickel Analyses

□ Pt (ppb)
• Ni (ppm)

